

The Importance of Context in Management Education

A Report

Mervin Morris

Queensland University of Technology

mj.morris@qut.edu.au

Jane Tsakissiris

Queensland University of Technology

jane.tsakissiris@qut.edu.au

Abstract

Engaging large first year classes in tertiary education poses a number of significant challenges, many of which have been addressed in the literature. One area that has not received the kind of attention it warrants is the context within which student learning takes place. This paper reports on the processes used to engage a large first year management class in an Australian university and how the context of the classes shaped activities and student responses to these activities. A key finding was the explicit acknowledgement of the role of context in shaping student behaviours and thus impacting on student engagement and learning outcomes.

Keywords

first year management classes, first year experience, large-scale teaching, learning environment, structuration theory, technology.

Introduction

This report combines a number of theories into an understanding of how context can impact upon student engagement in large first year management classes. Large first year Management classes (the illustrative case in this paper is based on a unit with 1280 students) pose a significant number of challenges for teaching staff ranging from the physical nature of the teaching space (usually large lectures theatres capable of holding 500 or more students) (Ogilvie, 2008); the student demographics (e.g., school leavers and mature age students); the technology available to assist student engagement (e.g., *TurningPoint*, *Skype*, *GoSoapbox*, and *YouTube*); and class timetabling such as the day of the week the class is held (e.g., Friday versus Monday) and time the class is held (early morning, midday or early evening). These are some of the significant factors that shape the contextual variables that instructors should take into account when designing instructional activities for large first year classes. In an endeavour to provide theoretical underpinnings, a theory was needed which could incorporate these disparate contextual elements. Such theoretical underpinnings can be provided by Giddens's Theory of Structuration (Giddens, 1979, 1984).

Giddens's (1979) structuration theory, based on the analysis of structure and agency, allows for an understanding of how structure (both physical and social) can impact student engagement. Student engagement is defined in this paper as the "the extent to which students are motivated, passionate and curious about their programme of study, the HE [higher education] provider community they

live and work within and its immediate environs" (Higher Education Academy, 2015, para. 1). Using structuration theory as a lens is useful as it considers key contextual factors and allows for investigating how these various elements might interact with, or how they may impact on, the learning process. The how and why of technology (as a mediating variable) also needs to be taken into account. Specifically, any effort to increase the interactivity between students within a lecture space will be bound by both physical and social structures and artefacts (such as technology) as well as student demographics. While the impact of context on the teaching process has been implicitly examined by a number of researchers using differing contextual variables the explicit discussion of the impact of a richer concept of context seems limited. Various techniques have been examined in the learning environment such as blended learning, technology aided instruction and flipped classrooms (see Arbaugh, 2010, 2014; Conklin, 2012; Lindorff & McKeown, 2013; Miner, 1992; Whetten, 2007). However, there appears to be little recognition of context that would explicitly take into account the physical learning environment; the class timetable; the various technologies available; student demographics and the characteristics of the instructional staff.

Educational theories that relate to learning styles and pedagogy should consider the contextual factors outlined above as all student learning occurs at a specific time and in a particular place or space. This paper is structured in the following way: first, there is a brief discussion of the relevance of Giddens's Theory of Structuration followed by a high level review of educational theory related to learning styles. An ethnomethodological case study is presented which identifies how context shapes student engagement. This case study provides guidance to others attempting to make student learning more active and engaging. This methodology effectively captures the dynamics of the learning processes and how context might have shaped such processes. Many other methodologies and their instruments (e.g., surveys, questionnaires, and interviews) tend to abstract actions from context and thus fail to capture the impacts of structure and agency as mediated by technology. The observers were also the participants and the various lessons to be learned came "out of" the lived experience of the two instructors teaching in the program (Angrosino, 2008; Strauss & Corbin, 1994). The impact of context is experienced in "real" time as events unfold.

Background

The research background to the study presented in this paper include: the theory of structuration (Giddens, 1979, 1984; Lefebvre, 1974/1991); definitions of learning styles (see, for example, Boyle, Duffy & Dunleavy, 2003; Cassidy, 2004; Dunn, Griggs, Olson, Beasley & Gorman, 1995; Kolb & Kolb, 2005; Montgomery & Groat, 1998; Tucker, 2007); and the metaphors of student engagement (Tiberius, 1986).

Theory of Structuration

At the core of the Giddens Theory of Structuration is a tension between structure and agency with neither one nor the other being privileged. The argument is essentially that social actors are knowledgeable, purposive beings with the ability to make choices. These choices will be enabled or constrained by structures of both a social and physical nature (Giddens, 1979, 1984). It was this idea that shaped the underlying assumptions that provided the framework guiding the study. The theory of structuration used in this paper incorporates disparate streams of research around teaching practice, learning styles and the sociology of student engagement as well as the importance of place (Lefebvre, 1974/1991) or physical space.

Learning Styles

Learning styles are functions of individual characteristics that relate to the theory of agency in regard to learning. It becomes important to acknowledge how learning styles can be impacted by

context and vice versa. The different activities used in an attempt to engage learners will provide a means to shaping the learning context. Learning is not taking place in a social or physical vacuum and contextual issues will impact students differently. Various learning styles exist for individual learners and disparate learner groups (for a review, see Cassidy, 2004). Therefore, there is difficulty in translating a (potentially) diverse range of learning styles into the teaching processes for large first year management classes. Attempts have been made to provide a degree of systematisation of learning styles (Boyle, et al., 2003; Dunn, et al., 1995; Kolb & Kolb, 2005) but these attempts tend to be context free. Tucker (2007) drew attention to a key set of variables informing learning styles such as culture, socio-economic background, gender, course of study and higher education experience while Montgomery and Groat (1998) raised the issue of context but only in terms of modifying any particular learning style.

Student Engagement

Tiberius (1986) outlined the teaching process as being divided into two main metaphors. First, there is the *transmission* metaphor, where students are the passive receivers of information transmitted by the instructor. In this metaphor, students play little part in the educational process, they are simply “empty vessels” to be filled with the knowledge, filtered, selected, and transmitted by the instructor. The second metaphor revolves more around *dialogues* or *conversations* between and among instructors and students. In theory, this metaphor of engaging students in their own educative process is more effective than the transmission metaphor. This raises the question of how it might be possible to introduce active learning principles into large first year management units. If, as we argue in this paper, the social and physical structures of the classes are taken into account as well as the characteristics of the individuals, then the student experience will be more meaningful and engaged rather than simply relying on the transmission (or empty vessels) metaphor.

First year Management unit

The unit (a first semester program) chosen as illustration for the study allowed for a variety of contextual factors to shape the way students experienced the learning activities. From a purely pragmatic perspective, the unit selected provided the necessary variation in context variables – structure and agency; time and space; and the mediating role of technology. The unit title was, simply, *Management*.

Unit Overview

Management is a core first year undergraduate management unit. Its aim was to develop a basic and applied understanding of key concepts and theories in management. The delivery of the Management syllabus for Semester 1 2015 was changed by the unit coordinator/lecturer from 12 weeks of “traditional” lectures to include a combination of lectures and lecture/workshops. The change of delivery allowed for a more socially inclusive pedagogy, to facilitate the high participation rates of students from diverse backgrounds and to take into consideration the different education pathways of students (Hitch, Macfarlane, & Nihill, 2015). Given the overall number of students involved in the unit, a decision was made to simply accept that there would be a variety of learning styles present in the classes. Rather than trying to cater to all possibilities, a variety of activities were designed that might appeal to a broad range of learning styles. It was for this reason that the lecture program was divided into three separate “categories” each occupying four weeks of a 13-week teaching period. These categories were:

- a conventional lecture;
- a summary lecture followed by individual activities; and
- a summary lecture followed by group activities.

The changes in structure were designed to provide students with innovative learning opportunities to increase student engagement as first year learning experiences at university are paramount to student success and their commitment to tertiary education (James, Krause, & Jennings, 2010; Johnston, 2010). The changes to the delivery of the unit consisted of an equal “split” between traditional lectures and lecture/workshops, with 4 lectures (that is, one lecture repeated 4 times per week, referred to as Session 1-4) and 8 lecture/workshops (also repeated 4 times per week) with a 3 week sequence of lecture, summary lecture and individual workshop and summary lecture and group workshop. This sequence was then repeated 4 times in the hope the variety of delivery methods would provide sufficient variety of encourage student engagement. This is summarised in Table 1.

Table 1. *Schedule of lectures and lecture/workshops*

Session	Day of week	Time (start)	Time (end)	Location
1	Tuesday	8:30 am	9:45 am	Lecture Theatre A
2	Tuesday	6:00 pm	7:15 pm	Lecture Theatre B
3	Wednesday	11:00 am	12:15 pm	Lecture Theatre C
4	Friday	4.00 pm	5.30 pm	Lecture Theatre D

The duration of the lecture and lecture/workshops was 1 hour 15 minutes and they were held in traditional large lecture theatres. Each lecture/workshop was based on individual activities and group activities as most workplaces tend to function around groups. It was hoped that, following Cassidy (2004) who alluded to structure and process based learning styles, such an approach would cater for the different learning styles.

Student Demographics

Student demographics have an important influence on the behaviour/attitudes to learning. For example, prior learning experiences and stage of life all have the potential to shape how students interact with the contextual elements of the teaching program. The students enrolled in the unit were predominately in the Business School and completing a degree in one or two of the following disciplines: Accounting; Advertising; Marketing and Public Relations; Economics and Finance; International Business; Journalism; Management and Human Resources; Economics; Media and Communication; or, Philanthropy and Non-profit Studies. The unit was also available for other students across the University to complete as a major/minor in Management or as an elective. The numbers of enrolments vary but are generally in the order of 1100 students per semester. For Semester 1 2015 (when this study was conducted), 1280 students were enrolled in the unit and the student cohort consisted predominantly of first semester first year students between 18-25 years of age. The majority of students had completed some form of relevant work experience before commencing the unit. Some were enrolled in part-time mode and attended evening classes while others were enrolled as external students.

Planning

For the lecture/workshops, the unit coordinator/lecturer was responsible for creating the lecture teaching and learning resources while the facilitator was responsible for creating the workshop

teaching and learning resources. The unit-coordinator/lecturer and facilitator met weekly after the first lecture/workshop session to reflect on the effectiveness of the teaching and learning strategies for the first session, making adjustments if necessary for the following sessions and discuss the workshop activities planned for the following week. Reflection was an important tool allowing the continuous development of pedagogical practice and enhancement of learning outcomes (Ryan & Ryan, 2013). It was during these meetings that it became apparent that considering contextual variables catering to differing learning styles was simply not sufficient. A number of different contextual factors were also identified which appeared to be impacting upon the level and extent of student engagement. For example, students who attended lectures in the morning classes seemed generally more interested in completing workshop activities whereas those who were attending the evening lectures were more difficult to engage as many had completed a full working day. The physical structure of the teaching spaces also impacted on the extent to which the teaching staff could interact with the class. For example, steep tiered lecture theatres made moving around the students difficult (and indeed hazardous). It was evident that there was a need to attempt to incorporate elements that appeared to shape the context of the teaching process.

The facilitator developed a workshop plan for each topic with the aims and objectives of the workshop aligned to the aims and objectives of the unit outline. The unit coordinator/lecturer had the responsibility of delivering the workshops on a Tuesday evening (Session 2) and Friday afternoon (Session 4) alone, therefore, a workshop plan was necessary to ensure consistency throughout all the sessions. The teaching and learning resources associated with each workshop activity were created for each of the four workshop sessions in advance of the workshops being held. Additional to the workshop plan, a workshop summary was created and uploaded to a File Exchange located on the university's learning management system (Blackboard) to provide the 22 tutors with a summary of what had occurred during the workshops before the tutorials commenced. The workshop plan and workshop summary were provided to the unit coordinator/lecturer for feedback and approval before distribution.

Teaching and Learning Strategies

The format of the lecture/workshops involved the unit-coordinator/lecturer delivering a 30-minute lecture at the beginning of the session to discuss the relevant theory for each topic followed by a 30-minute workshop delivered by the facilitator. A summary of key points derived from the lecture/workshop was delivered by the unit coordinator/lecturer for the remaining 15 minutes of the lecture/workshop. It was this principle of engagement that was used to structure the learning activities irrespective of what type of learning activity was conducted.

Each workshop consisted of two to three interactive learning activities that allowed students the opportunity to inquire, explore and explain management theory and practice. Customised teaching strategies selected and applied for the lecture/workshops included: direct instruction, whole of class and group discussion, small-group work, student research, cooperative learning, problem solving, and case study (Killen, 2012). The conscious effort to include humour through various mediums assisted in creating a non-threatening learning environment which can be experienced by students when having to sit in large lecture theatres. Students advised that they liked the "interaction, the slides, the jokes, [making it] easy to pay attention."

The students were required to complete the recommended readings for each topic and to review the lecture notes before attending a lecture/workshop. Unfortunately, it was extremely rare for students to complete the required preparation prior to the lecture. To counter this lack of preparedness, an abbreviated 30-minute lecture was delivered to introduce the topic prior to the workshop. During the workshop activities, students were given the opportunity to demonstrate their understanding, receive real-time constructive feedback and reflect on their learning. At the beginning of the semester, students were informed of the changes made to the unit delivery methods hence their feedback throughout the semester was important. The use of various forms of evaluation throughout the semester enabled the use of managerial control techniques to enhance teaching practices and learning outcomes for students (Cathcart, Greer, & Neale, 2014).

Guest speakers allowed students the opportunity to gain an understanding of organisational experiences they may encounter as a manager and, in so doing, assisted students with forming their professional identity as a manager. It was imperative the guest speakers had management and leadership experience and were currently working in industry. The guest speakers in Semester 1 2015 were from Los Angeles, Sydney and Brisbane. To discuss the topic of leadership a prominent female entrepreneur provided her achievements and experiences to the class and answered questions from the students. A female guest speaker was specifically selected for the workshop to highlight the importance of female leaders in organisations.

Learning and Teaching Spaces

The scheduling, timing and location of the lectures and the lecture/workshops have been discussed (see Table 1). The instructors had no control over the size/nature of the centrally allocated teaching spaces. Further, the institution had only one large lecture theatre that would cater for 565 students and demand from other first year units meant that not all requests for the larger theatre could be met. Therefore, four learning and teaching spaces (Lecture Theatres A-D) had to be used to cater for an unexpectedly high number of enrolments and the availability of learning and teaching classroom spaces that had sufficient seating capacity. This was the first occurrence of having four sessions during a week for the unit. Despite each lecture theatre having a traditional lecture design, there were differences in the physical layout for each lecture theatre. For example, Lecture Theatre A had rows that had a very steep vertical elevation compared to Lecture Theatre C that had a flatter elevation. The nature of these spaces shaped what was, and was not, possible in terms of engaging students in the classroom activities.

The design of the large traditional lecture theatres, by their very structure, does not easily facilitate one-to-one or small group interactions as students are at different levels. The fixed seating also meant that they were facing the front rather than being able to face each other when discussing topics or expressing a viewpoint. Because of the physical layout, each student had to physically turn around to talk to/with others, an action that was both awkward and uncomfortable. This discomfort impacted on the effectiveness of in-class discussion. One student simply offered that “the lecture theatre makes it hard to get engaged and participate with other students.”

Further, the large physical structure allowed students the opportunity to distance themselves from others when class attendance started to decrease as the semester progressed. As a workaround, students were asked to move out of their selected seats to participate in small group discussions and to move closer to the front during whole of class activities. The facilitator and unit coordinator/lecturer walked the aisles during the workshop to create a feeling of togetherness with the audience. This encouraged students to share their views despite the physical constraints of the learning spaces. Finally, the ability for the instructor to walk around to each of the groups to foster and guide their in-group discussion was challenging given the large area and the fixed seating arrangement.

Another challenge to overcome was the acoustics in the lecture theatre. For example, a student who was hearing impaired raised the issue that “there is too much noise with discussions to concentrate” and when discussing this with the facilitator requested that she not to be asked to share her viewpoint using the microphone. There was one projector screen in the large lecture theatres. However, having two projector screens would have enhanced the interaction between the students and the facilitator. For example, *GoSoapBox*, a “voting” system to synchronously record and display student input, could have been used simultaneously with PowerPoint. This would have allowed the *GoSoapBox* features such as the *Confusion Barometer* and the *Social Q & A* to be displayed throughout the workshop.

Technology

Various forms of technology were incorporated into the unit to enhance content delivery, increase student participation and achieve positive learning outcomes for students. Empirical research has identified the importance of incorporating technology into lectures to increase student engagement (MacGeorge et al., 2008; Malin, 2014). As noted, the details for each topic were made available on Blackboard, under the headings of: Overview; Preparation; During Class; After Class/Tutorial; and, Deepening and Extending Your Knowledge. A teaching and learning consultant (a member of the University's professional staff with specific expertise in the design and delivery of units) was responsible for creating a Blackboard site to correspond with the delivery of the unit. A closed Facebook site was set up and used to encourage communication between and among students and academics throughout the semester. Approximately 80 per cent of students joined the lightly-moderated Facebook page. All lectures were recorded and made available to students online. Further, and already mentioned, technologies such as *GoSoapBox*, *Skype*, *YouTube*, standard videos and the Internet were incorporated into the workshop activities to allow students the opportunity to interact with international and national business executives and to foster whole of class and small group collaboration.

To allow students the opportunity to interact with an international business executive from Los Angeles, *Skype* was used in the *What Do Managers Do* workshop. The time zone difference and the availability of the guest speaker resulted in the *Skype* call occurring in Session 1 and Session 3 in Week 4. The use of an electronic questionnaire from their recommended readings was first completed by the students before the *Skype* call and then completed by the guest speaker during the call in front of the students to provide a real-time example of how an executive manager would answer the questionnaire. The guest speaker discussed the rationale behind each of the answers provided. The feedback from students indicated that this activity was highly popular. The students' engagement with this activity appeared to be influenced by having an opportunity to converse with a successful US business professional who had completed a postgraduate degree from a prestigious US university and was known as a transformational leader. This activity is an example of how the workshop activities were structured around individual responses rather than group discussions and could thus transcend the difficulties imposed by the physical space.

Various forms of video material were shown during the lecture/workshops to capture the interest of students for topics such as the *Employment Relationship*, *Planning*, and the *Management of Diversity*. For example, comedy skits from *The Office*, a popular television series, allowed students to visually interpret and understand a range of management practices. A further example, designed to overcome the difficulty of organising an off-campus visit for such a large group of students, a video-recorded interview was displayed during a workshop activity that involved the facilitator asking the guest speaker from Sydney about the importance of planning for managers.

Feedback

Despite there being no formal data collection of attendance figures, it was noticeable that, compared to previous semesters, student attendance in Semester 1 2015 had increased. The feedback from students indicated that the introduction of the lecture/workshops had achieved the overall objective to increase student engagement. The effective collaboration between the unit coordinator/lecturer and the facilitator and the resulting different but complementary delivery of content assisted in creating an effective learning experience for the students. The unit coordinator/lecturer and facilitator's qualifications, teaching and management experience were crucial for providing multiple, varied and real-world learning opportunities for the students.

Figure 1 illustrates the results of a *GoSoapBox* questionnaire undertaken by the students ($n=213$) during the semester for each session. They were asked if the workshops were beneficial to their learning.

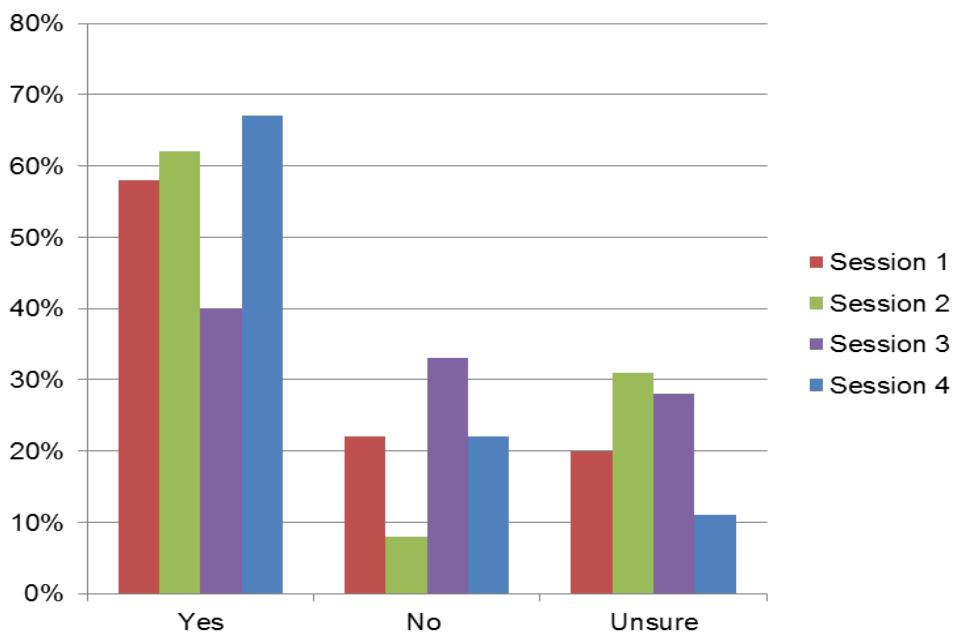


Figure 1. Student questionnaire results from four workshop sessions (Semester 1 2015)

There was a difference in responses between the sessions (refer also to Table 1). The most positive response was from Session 4 (with just under 70 per cent agreeing and having the lowest percentage of students “unsure” of the value). The least positive response was from Session 3 with fewer than half agreeing that the workshops were beneficial and there being marked uncertainty as to the benefit.

Overall 60 per cent of students ($n=107$) thought that the workshops were beneficial to their learning. One student anonymously indicated that: “it changed the traditional boring lecture stereotype. It was refreshing how the class engaged with the lecturers and was learning in ways other than reading from the board. The organised Skype call was an effective idea.”

Twenty two per cent of students ($n=52$) that found the workshops not to be beneficial to their learning, as they preferred a more traditional lecture style and 24% (average) of students ($n=54$) were unsure if the workshop was beneficial to their learning.

The feedback from the students indicated that: having “to actively think about problems”; the “interactive nature” of the workshops; the “video components” and “interaction with real managers” resulted in the workshops being “very relevant and highly enjoyable” and the “chocolate was a bonus.” The “lack of audience participation” frustrated students as some were apprehensive to share their viewpoint using a microphone despite various techniques implemented by the facilitator and unit-coordinator/lecturer to reassure students that all viewpoints they shared were beneficial to student learning. It was evident when the workshop was not recorded, student participation increased. For example, the *Management of Diversity* workshop was not recorded and this made a significant difference in the students offering their viewpoints. Other issues raised by students include: the time-slot of the lecture/workshops; relevance to assessment; beneficial if more students attended all lecture/workshops and the lecture/workshop should be of shorter duration.

Conclusion

The findings support an argument for the theory of structuration being used as a way to examine pedagogy in tertiary education. The Theory of Structuration (Giddens, 1979, 1984) provides for both structure (social and physical) as well as agency. These two key elements need to be taken into consideration in any attempt to improve the engagement levels of students in large first year management classes as it draws attention to the dynamic nature of the impact of structure and agency on the overall teaching and learning process. By explicitly taking such considerations into account when designing a blended learning experience there might be a greater chance that students will engage more in active learning, rather than, as Lindforff and McKeown (2013) claimed, first year management students prefer online material that is related to assessment outcomes, rather than that designed for greater understanding.

References

Angrosino, M.V. (2008). Recontextualising observation: Ethnography, pedagogy, and the prospects for a progressive political agenda. In N.K. Denzin & Y.S. Lincoln (Eds.), *Collecting and interpreting qualitative materials*. Thousand Oaks, CA: Sage.

Arbaugh, J.B. (2010). Do undergraduates and MBAs differ online: Initial conclusions from the literature. *Journal of Leadership and Organizational Studies*, 17(2), 129-142.

Arbaugh, J.B. (2014). What online delivery might teach us about blended management education? Prior perspectives and future directions. *Journal of Management Education*, 38(6), 784-817.

Boyle, E., Duffy T., & Dunleavy, K. (2003). Learning styles and academic outcome: The validity of Vermunt's inventory of learning styles in a British higher education setting. *British Journal of Educational Psychology*, 73, 267-290.

Cassidy, S. (2004). Learning styles: An overview of theories, models, and measures. *Educational Psychology: An International Journal of Experimental Educational Psychology*, 24(4), 419-444.

Cathcart, A., Greer, D., & Neale, L. (2014). Learner-focused evaluation cycles: Facilitating learning using feedforward, concurrent and feedback evaluation. *Assessment & Evaluation in Higher Education*, 39(7), 790-802.

Conklin, T. A. (2012). Making it personal: The importance of student experience in creating autonomy – supportive classrooms for millennial learners. *Journal of Management Education*, 37(4), 499-538.

Dunn, R., Griggs, S.A., Olson, J., Beasley, M., & Gorman, B. S. (1995). A meta-analytic validation of the Dunn and Dunn model of learning style preferences. *Journal of Educational Research*, 88(6), 353-362.

Giddens, A. (1979). *Central problems in social theory: Action, structure and contradiction in social analysis*. London: Macmillan.

Giddens, A. (1984). *The constitution of society: An outline of the theory of structuration*. Cambridge, UK: Polity.

Higher Education Academy. (2015). *HEAtoZ: Student engagement*. Retrieved from <https://www.heacademy.ac.uk/enhancement/definitions/student-engagement>

Hitch, D., Macfarlane, S., & Nihill, C. (2015). Inclusive pedagogy in Australian universities: A review of current policies and professional development activities. *The International Journal of the First Year in Higher Education*, 6(1), 135-145.

James, R., Krause, L., & Jennings, C. (2010). *The first year experience in Australian universities: Findings from 1994 to 2009*. Australia: Centre for Studies of Higher Education, University of Melbourne. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.723.8190&rep=rep1&type=pdf>

Johnston, B. (2010). *The first year at university: Teaching students in transition*. Maidenhead, UK: McGraw-Hill Education.

Killen, R. (2012). *Effective teaching strategies: Lessons from research and practice* (6th ed.). Melbourne, Australia: Cengage Learning Australia.

Kolb, A. Y., & Kolb, D. A. (2005). Learning styles and learning spaces: Enhancing experiential learning in Higher Education. *Academy of Management Learning and Education*, 4(2), 1093-212.

Lefebvre, H. (1974/1991). *The production of space*. (D. Nicholson Smith, Trans.). Oxford, United Kingdom: Basil Blackwell.

Lindorff, M., & McKeown, T. (2013). An aid to transition? The perceived utility of on line resources for on campus first year management students. *Education and Training*, 55(4-5), 414-428.

MacGeorge, E. L., Homan, S. R., Dunning, J. B., Elmore, D., Bodie, G. D., Evans, E., & Geddes, B. (2008). Student evaluation of audience response technology in large lecture classes. *Educational Technology Research and Development*, 56(2), 125-145.

Malin, M. (2014). Enhancing lecture presentation through tablet technology. *Accounting Research Journal*, 27(3), 212-225.

Miner, R. (1992). Reflections on teaching a large class. *Journal of Management Education*, 16(3), 290-302.

Montgomery, S. M., & Groat, L.N. (1998). Student learning styles and their implications for teaching, *CRLT Occasional Papers, No. 10*. Ann Arbor, MI: The Centre for Research on Learning and Teaching, University of Michigan.

Ogilvie, C. A. (2008). Swivel seating in large lecture theatres and its impact on student discussions and learning. *Journal of College Science Teaching*, 37(3), 50-56.

Ryan, M.E., & Ryan, M. (2013). Learning and teaching reflection: Developing capacities for lifelong learning. In P.B. Hudson (Ed.), *Learning to Teach in the Primary School*. (pp. 292-310). Melbourne, Australia: Cambridge University Press.

Strauss, A., & Corbin, J. (1994). Grounded theory methodology: an overview. In N. Denzin, & Y.S. Lincoln (Eds.), *Handbook of Qualitative Research*. Los Angeles, CA: Sage.

Tiberius, R. G. (1986). Metaphors underlying the improvement of teaching and learning, *British Journal of Educational Technology*, 2(17), 144-156.

Tucker, R. (2007). Southern drift: The learning styles of first and third year students of built environment. *Architectural Science Review*, 50(3), 246-255.

Whetten, D.A. (2007). Principles of effective course design: What I wish I had known about learning centered teaching 30 years ago. *Journal of Management Education*, 31(3), 339-357.

Copyright © 2017 Mervin Morris and Jane Tsakissiris